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■ Guide To Career Choices

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OCCUPATIONS IN metalworking & plastics working

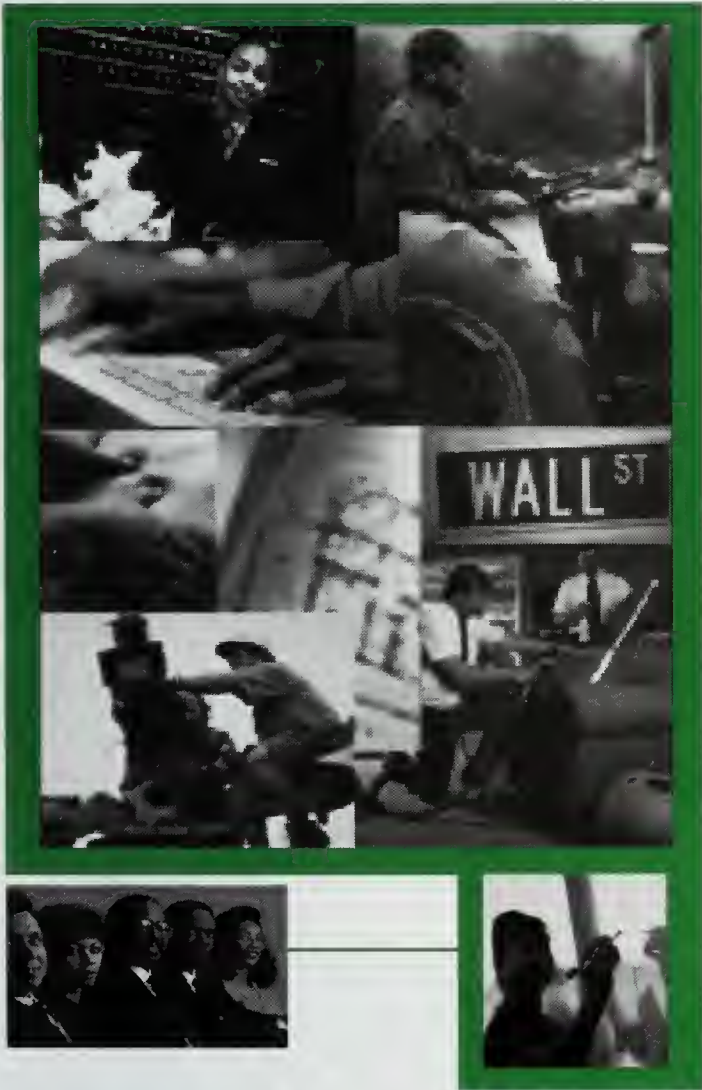
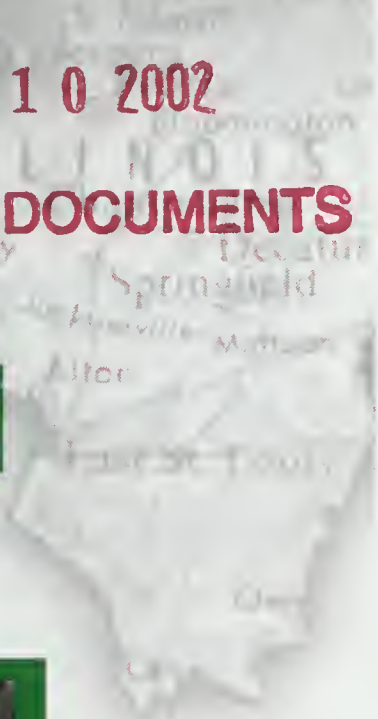
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a brief look at:

APR 10 2002

- jobs
- education and training requirements
- wages
- outlook

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OCCUPATIONS IN METAL-
WORKING & PLASTICS WORKING
guide no. 21

ENTRY : The mean (average) of the bottom third of wages in an occupation.
 MEDIAN: Half of the workers in the occupation earn more than this wage; half earn less.
 EXPERIENCED : The mean of the top two-thirds of wages in an occupation.

HS > High School diploma or equivalent
 AD > Associate Degree of Arts/Science
 community college, 2 years
 BA/BS > Bachelor of Arts/Science degree
 colleges/universities, 4 years



OUTLOOK HOURLY WAGES

Career Opportunities	2008 EMPLOYMENT	LONG-TERM OUTLOOK	SHORT-TERM FORECAST	ENTRY	MEDIAN	EXPERIENCED	EDUCATION AND TRAINING
Combination Machine Tool Operators/Tenders	3,855	F	VUF	\$7.07	\$9.81	\$11.65	HS/GED may be required for jobs as Machine Operators and Tenders. Courses in shop, mathematics, blueprint reading and knowledge of the properties of metals and plastics provide an excellent background. Skills are learned on the job by observing and assisting experienced workers, often as part of a formal training program. Several years may be needed to become a skilled operator to advance to the even more highly skilled position of Set-Up Operator. Operators of numerical control (NC) machine tool are trained to set-up and run one or more kinds of NC machine tools and may also attend programming courses.
Combination Machine Tool Setters/Set-Up Operators	7,501	F	VUF	\$8.19	\$11.76	\$14.53	
Extruding and Drawing Setters, Metal/Plastic	3,925	F	VUF	\$9.63	\$12.09	\$13.63	
Machine Forming Operators/Tenders	13,974	VUF	VUF	\$7.09	\$9.92	\$11.71	
Machine Tool Cutting Operators	4,106	VUF	VUF	\$7.78	\$11.32	\$14.26	
Numerical Control Machine Tool Operators/Tenders	10,497	VF	F	\$8.41	\$12.19	\$15.71	
Plastic Molding Machine Operators/Tenders	10,358	VF	VUF	\$6.02	\$8.21	\$10.02	
Plastic Molding Machine Operators/Setters	2,915	F	VUF	\$8.17	\$10.79	\$12.38	
Welding Machine Operators/Tenders	5,235	F	VUF	\$8.01	\$11.33	\$14.05	
Machinists	25,474	F	VUF	\$9.52	\$14.31	\$16.90	
Sheet Metal Workers	9,373	VF	F	\$10.75	\$20.85	\$24.76	HS, an apprenticeship program and four to five years of on-the-job training.
Tool & Die Makers	8,993	VUF	VUF	\$12.47	\$17.96	\$21.19	HS and five-year apprenticeship or on-the-job training and community college.
Welders & Cutters	21,072	VF	VUF	\$9.50	\$13.18	\$15.59	Highly skilled jobs require several years of combined school and on-the-job training. Certified welders who meet specified welding standards have the best job prospects and mobility.

• Occupational growth rates and job opening data are based on All-Industry projections through the year 2008.

• Long-Term Outlook and Short-Term Forecast descriptors are derived from projected employment growth and the level of employment for the occupation as a percentage of total employment.

• Wage data cover full-time, part-time and seasonal employees but exclude temporary and contractual workers. Wages include piece rates, commissions and cost-of-living allowances but exclude overtime and tips.

***data are not available

F Favorable
 VF Very Favorable
 UF Unfavorable
 VUF Very Unfavorable

■ WHAT ARE SOME OF THE JOBS?

MACHINE OPERATORS AND TENDERS...monitor production machinery which either (1) cuts and forms metal parts, or (2) transforms chemical compounds in powder, pellet or syrup form into plastic consumer goods. Set-up workers, or setters, prepare machinery before production starts and make adjustments to equipment during operations. Increasingly, all of these workers are being called upon to run machinery which is computer numerically controlled (known as CNC or NC). Workers trained to run this kind of equipment are known as numerical control machine operators.

MACHINISTS...use machine tools such as lathes, drill presses and milling machines to produce precision metal parts. They are highly skilled with machine tools and have extensive knowledge of the working properties of metals. They review blueprints for a job, plan the entire sequence of operations required, and (traditionally) perform the machining. Experienced machinists may become tool programmers, who specialize in writing programs for CNC machine tools. These tools perform automatic machining operations.

TOOL AND DIE MAKERS...often considered to be highly specialized machinists...have a broad knowledge of machining operations, mathematics and blueprint reading. Tool makers craft precision tools used to shape metal and other materials. They also produce jugs and fixtures: devices that hold metal while it is being worked. Die makers construct metal forms (dies) used in metal stamping and forging and also make metal molds, used for die-casting and for molding plastics, ceramics and composite materials.

WELDERS...create a permanent bond between metal pieces, using a wide variety of methods which involve the application of heat. Heat may be generated from electric arcs, burning gases or other sources. Arc, plasma and flame cutters use heat to cut metal to specific dimensions or to entirely dismantle large metal structures.



■ WHAT IS THE JOB OUTLOOK?

Employment in this field is expected to show slower-than-average employment growth through the year 2008. Nevertheless, job opportunities will be good, as employers continue to report difficulties in attracting workers to machining and tool programming occupations. Therefore, candidates with the necessary mechanical and mathematical aptitudes should encounter ample demand for their skills. A major factor driving the employment decline is the implementation of labor-saving machinery such as computer controlled machine tools and robots. However, highly skilled workers who play a key role in the operation of many firms which produce durable goods such as motor vehicles, aircraft, industrial machinery and other products that use machined metal parts, should help to moderate the decline in employment.

■ WHERE CAN I FIND ADDITIONAL INFORMATION?

The Occupational Outlook Handbook, 2000-01 Edition, contains many additional sources of information for over 250 occupations in all sectors of the economy. You may order the Handbook by contacting the U.S. Government Bookstore, 401 South State Street, Suite 124, Chicago, Illinois 60605-1297, 312/353-5133 or check out the online version at <http://stats.bls.gov/ocohome.htm>.

For access to other labor market and workforce information on the internet, visit the following sites:

IDES' home page: <http://www.ides.state.il.us>,

LMI Source: <http://lmi.ides.state.il.us>,

Workforce Info Center: <http://www.ILWorkInfo.com> and a site targeted towards high school students:

<http://www.workforceinfo.state.il.us>.



Career Guide Sources:

Illinois Department of Employment Security's "Occupational Projections" and "Occupational Employment Statistics Wage Data" and the U.S. Bureau of Labor Statistics' "Occupational Outlook Handbook"

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